2017 ESTG Working Group Descriptions

1) **DC Hazardous Energy – Gary Dreifuerst / Stan Berry**

   Best Practice BP-194-DC Arc Flash Calculator is complete and posted on the website. The calculator offers a variety of methods. Simplifying calculations to be user friendly for site-specific documentation. Battery Risk Assessment flow chart has been well received and is available for use. Future products for this working group will focus on Ground Hook Safety, Pulse powered and Capacitor bank type tools. ASTM F711 (Live line tool). The PPE required for DC systems based on Bipolar, Unipolar, Grounded or Ungrounded Systems, Class 1 Goods definitely need to be considered for 1KVDC Systems. The increased usage of DC Systems has increased 20% since 2015. NFPA 70 2017 NEC added 4 new code articles specifically addressing DC in special systems. Mike Hicks suggested a Lithium Ion Batteries Electrical Safety Best Practice for FY18 either by HEC or the DC working group.

2) **HEC – Stephanie Collins / Dave Lipinski**

   Deliverables for the summer include Look a like equipment BP, Contact and Release BP. The HEC has begun developing a process that is duplicable complex wide. A “bare bones” or “simple” LOTO program was requested that can serve as a minimum requirement that can be built upon for site–specific applications. The HEC group had a large number of new attendees and the initial crosswalk and rework of initial document took a great deal of the time allotted. HEC expects to deliver the best practice for Look a like equipment at the summer workshop. HEC believes we should be identifying controls related to electrical energies, not for all other associated energies i.e. pressure, hydraulic, thermal, chemical, mechanical, etc. The discussion revealed an interest for an industrial HECG. An inter-disciplinary group to identify the thresholds for these types of systems then determines the process for controls.

3) **Subcontractor Electrical Safety Management – Jim Watson / Jeff Williams**

   Jim Watson suggests web-based tools for all subcontractor work based on Appendix D of DOE-HDBK-1092-2013. Subcontractor Electrical Safety Management can be difficult when distinguishing between Construction, R&D, and Vendors. All could be approached in many different ways. It would be ideal to have a best practice to the flow down of requirements regarding “qualified person”. The term “demonstrate” to be incorporated throughout, currently is measured or unidentified, not providing a consistent approach. Training, Qualifications, Qual Cards, along with OJT, and OJE all relevant to the process.

4) **NFPA 70E Risk Assessment / Operation of OCPD’s – Greg Christensen / Jennifer Martin**

   A query from the complex was used to benchmark current standard editions used in DOE. We range from 2004 – 2015. Another query was used asking the minimum level of PPE used during the operation of OCPD’s. This again raised the question are we willing to dress or not dress our operators based on the information provided by the definition of “Normal Operation”. The working group has developed information regarding the proper documentation that would be needed to take credit for: Properly Installed,

Properly Maintained and a spreadsheet describing what signs of impending failure may be.

The deliverable will a best practice prescribing a minimum level of daily wear for those who operate OCPD's. The group maintains an understanding that the individuals operating such devices may not be exposed to an arc flash or failure; but agrees they should be wearing something that can provide a positive common sense approach to engaging with electrical equipment with the potential to surprise. Minimum levels for PPE and voltage levels of operation will be incorporated.

5) **Electrical Training – Lloyd Gordon / Andrew Olsen**

This is a new working group established at the 2017 Winter Meeting. The goal of the group is to establish high quality electrical training content using a consensus of industry experts. The first training deliverable the group needs to achieve at the Summer Working Meeting will be to develop the training requirements and content for the "Contact Release" training that is identified in NFPA 70E. Additional topics that the group is also looking to support include: Battery Safety, Capacitor Safety, Equipment Operation Near Power Lines, NFPA 70E, Electrical Safety for Non-Electrical Workers, and more.